



1/30

- A. Differential Display Downstream Primer 7: (SEQ ID NO: 17)
5'TTTTTTTTTTGA3'
- B. Differential Display Upstream Primer 15: (SEQ ID NO: 18)
5'GATCAATCGC3'
- C. 5'RACE Primer 2a: (SEQ ID NO: 19)
5'TAGGACATGCACAGTGTAACTG3'
- D. 5'RACE Primer 3a: (SEQ ID NO: 20)
5'GATTGTGTGGCCACTTCTC3'
- E. 5'RACE Primer 4a: (SEQ ID NO: 21)
5'GACACTCCAGGGACTGAAG3'
- F. 5'RACE Anchor Primer: (SEQ ID NO: 22)
5'CUACUACUACUAGGCCACGTCGACTAGTAGGGIIGGGIIG3'
- G. 5'RACE Universal Amplification Primer: (SEQ ID NO: 23)
5'CUACUACUACUAGGCCACGTCGACTAGTAC3'
- H. 5'LPL Primer: (SEQ ID NO: 24)
5' ACCACCATGGAGAGCAAGCCCTG3'
-start codon of human LPL coding sequence is underlined
- I. 3'LPL Primer: (SEQ ID NO: 25)
5' CCAGTTTCAGCCTGACTTCTTATTC3'
-complement to the termination codon of the LPL coding sequence is underlined
- J. Primer DLIP774: (SEQ ID NO: 26)
5'GGCTGTGGACTCAACGATGTC3'
- K. Primer LLGen2a: (SEQ ID NO: 27)
5'CCGGGTGGGTAGGTACATTTTG3'
- L. Hllg-gsp1 primer: 5' GGG GGT GAC TTC CAG CCA GGC TGT G 3'
(nucleotides 772-796 in Fig. 4, SEQ ID NO: 28)
Hllg-gsp2a primer: 5' AAC TCT GAA AGG CAT GCC TGC CCG G 3'
(reverse complement of nucleotides 1053-1077 in Fig. 4, SEQ ID NO:29)
G3PDH 5' primer: 5' TGA AGG TCG GAG TCA ACG GAT TTG GT 3'
(SEQ ID NO: 30)
G3PDH 3' primer: 5' CAT GTG GGC CAT GAG GTC CAC CAC 3'
(SEQ ID NO: 31)

FIG. 1

BEST AVAILABLE COPY

GAATTCGGCTTGATCAATCGCTTCAAAAAGGGGATCTGTCTGAGCTGCCGCAAGAACCGTTGTAATAG
CATTGCTACAATGCCAAGAAATGAGGAACAAGAGGAACAGCAAAATCTACCTAAAAACCCGGGCAG
 E F G L I N R F K K G I C L S C R K N R C N S
GCCTTCAGAGGTAACTTCAGTCCCTGGAGTGTCCCTGAGGAAGCCCTTAATACCTCTCTTAAT
 Coding region
I G Y N A K K M R N K R N S K M Y L K T R A
ACCATGCTGCAGAGCAGGCGACATCCTAGCCCAGGAGAAAGTGGCCAGCACAAATCCAATCAAATCGTTG
 Coding region
P F R G N L Q S L E C P . G R P L I P P S .
TCAGATTACACTGTGCATGTCTAGGAAAGGGAATCTTTACAAATAATACAGTGTGGACCCCTCAAAA
 Y H A A E Q G T S . P R R S G Q H N P I K S L
AAAAAAAAGCCGAATTC 367
 I R L H C A C P R R K G N L Y K I N S V D P S K
 K K K S R I

FIG. 2

GAATTCGGCTTCTACTACTAGGCCACGGCTCGCCTAGTACGGGGGGGGGGGGGGGGTACGGCAG

TCCTTGCCCTCCCGCGGCTCAGGACGAGGGCAGATCTCGTTCTGGGGCAGCCGTTGACACTCGCTCC

R I R L L L L L G H A S P S T G G G G G V S E
CCCCGGCTCCGTGCGCCAAAGTTTCATTTCCACCTTCTCTGCTCCAGTCCCCCAGCCCCCTGGCCG

S L P P G G S G R G Q I S F W G K P L T L A P
AGAGAAGGGTCTTACCGGCCGGGATTGCTGGAACACCAAGAGTGGTTTTTGTGTTTTTAAACTTCT

P G S V P P S F F H F P P S L P P V P Q P L A
GAGGGGTGTGGCGGGCAGGATGAGCAACTCCGTTCTCTGCTCTGTTTCTGGAGCCTCTGCTATTG

E R R V L P A G I A G N T K R W F L F F K T S
CTTTGCTGCGGGAGCCCCGTACCTTTTGGTCCAGAGGACGGCTGGAAGATAAGCTCCACAACCCA

E G V W R G R M S N S V P L L C F W S L C Y C
 AGACTGAGGTCAAACCATCTGTGAGGTTTAACCTCCGCACCTCCAAGGACCCAGAGCATGAAGGATGC

Coding region: 5'RACE extension
 F A A G S P V P F G P E G R L E D K L H K P
 TACCTCTCCGTCGGCCACAGCCGCCCTTAGAAGACTGCAGTTTCAACATGACAGCTAAACCTTTT

———— Coding region: 5' RACE extension ————
Q T E V K P S V R F N L R T S K D P E H E G C
CGGATGGACGATGAGCGGTATCTTTGAAAACCTGGCTGCACAACTCGTGTGTCAGCCCTGCACACACAGAG

Coding region:5'RACE extension

Y L S V G H S Q P L E D C S F N M T A K T F F
AGAAAGACGCGCAATGATTGTTGACTGGCTCCCCCTGGCCACCCAGCTTTACACGGATGCGGTC

FIG. 3A

----- Coding region:5'RACE extension -----
G W T M S G I F E N W L H K L V S A L H T R
AGGTTGGTGACACAGCATGCCAGGATGCTCGACTGGCTGCAGGAGAAGACGATTTTCTCTCGG

----- Coding region:5'RACE extension -----
E K D A N V V V D W L P L A H Q L Y T D A V
GAATGTCCACTTGATCGGCTACAGCCTCGGAGCGCACGTGGCCCGTATGCAGGCAACTTCGTGAAAG

----- Coding region:5'RACE extension -----
R V V G H S I A R M L D W L Q E K D D F S L G
GCCGAATCACAGGTTGGATCCTGCCGGGCCCATGTTGAAGGGCCGACATCCACAAGAGGCTCTCT

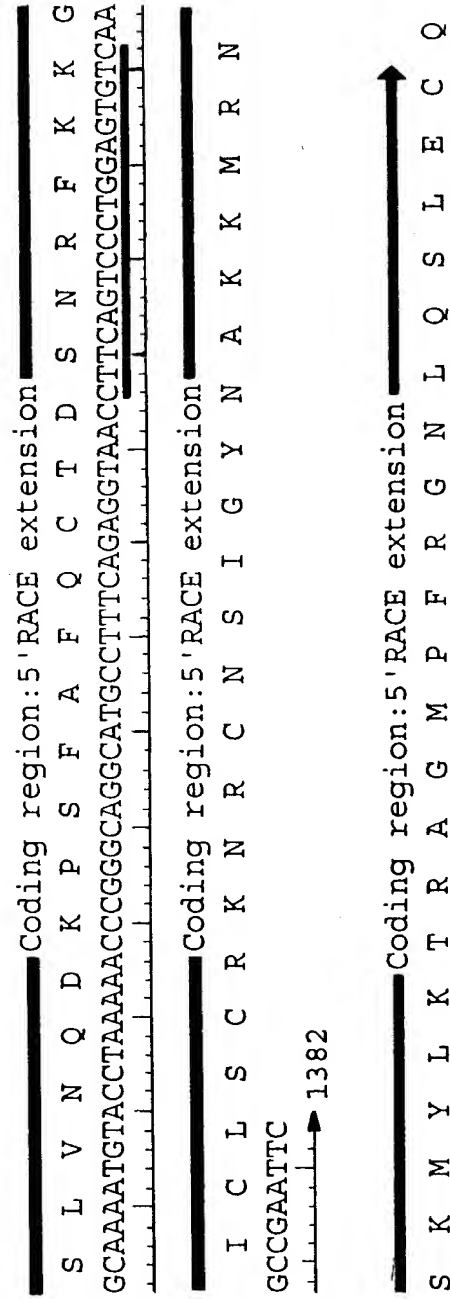
----- Coding region:5'RACE extension -----
N V H L I G Y S L G A H V A G Y A G N F V K
CCGGACGATGCAGATTTTGTGGATGTCCTCCACACCTACACGCGTTCCTTCGGCTTGAGCATTGGTAT

----- Coding region:5'RACE extension -----
G R I T G L D P A G P M F E G A D I H K R L S
TGTGGCCACATTGACATCTACCCCAATGGGGTGACTTCCAGCCAGGCTGTGGACTCAACGATGTCT

----- Coding region:5'RACE extension -----
P D D A D F V D V L H T Y T R S F G L S I G I
TGGGATCAATTGCATATGGAACAATCACAGAGGTGGTAAATGTGAGCATGAGCGAGCCGTCCACCTC

----- Coding region:5'RACE extension -----
V G H I D I Y P N G G D F Q P G C G L N D V
TCTCTGGTGAATCAGGACAAGCCGAGTTTTCCTTCAGTGCACTGACTCCAATCGCTTCAAAAAGGG

----- Coding region:5'RACE extension -----
L G S I A Y G T I T E V V K C E H E R A V H L
GATCTGTGAGCTGCCGAAGAACCCTTGTAATAGCATTTGGCTACAATGCCAAGAAAAATGAGGAACA



A E F

FIG. 3C

GAATTCGCGGCCGCGTCTGACGGCGGCTCAGGACGAGGGCAGATCTCGTTCTGGGGCAAGCCG
 TTGACACTCGCTCCCTGCCACCGCCCGGGCTCCGTGCCGCCAAGTTTTTCATTTTCCACCTTCT
 CTGCCTCCAGTCCCCCAGCCCCCTGGCCGAGAGAAGGGTCTTACCGGCCGGGATTGCTGGAAA
 CACCAAGAGGTGGTTTTTTGTTTTTTTAAACTTCTGTTTCTTGGGAGGGGGTGTGGCGGGGAGG
ATGAGCAACTCCGTTCCCTCTGCTCTGTTTTCTGGAGCCTCTGCTATTGCTTTGCTGCGGGGAGCC
 CCGTACCTTTTGGTCCAGAGGGACGGCTGGAAGATAAGCTCCACAAACCCAAAGCTACACAG
 ACTGAGGTCAAACCATCTGTGAGGTTTAACCTCCGCACCTCCAAGGACCCAGAGCATGAAGG
 ATGCTACCTCTCCGTCCGCCACAGCCAGCCCTTAGAAGACTGCAGTTTCAACATGACAGCTAA
 AACCTTTTTTCATCATTACGGATGGACGATGAGCGGTATCTTTGAAAAGTGGCTGCACAACT
 CGTGTCAGCCCTGCACACAAGAGAGAAAGACGCCAATGTAGTTGTGGTTGACTGGCTCCCCCT
 GGCCACCAGCTTTACACGGATGCGGTCAATAATACCAGGGTGGTGGGACACAGCATTGCCA
 GGATGCTCGACTGGCTGCAGGAGAAGGACGATTTTTCTCTCGGGAATGTCCACTTGATCGGCT
 ACAGCCTCGGAGCGCACGTGGCCGGGTATGCAGGCAACTTCGTGAAAGGAACGGTGGGCCGA
 ATCACAGGTTTGGATCCTGCCGGGCCCATGTTTGAAGGGGCCGACATCCACAAGAGGCTCTCT
 CCGGACGATGCAGATTTTGTGGATGTCCTCCACACCTACACGCGTTCCTTCGGCTTGAGCAT
 GGTATTGAGATGCCTGTGGGCCACATTGACATCTACCCCAATGGGGGTGACTTCCAGCCAGGC
 TGTGGACTCAACGATGTCTTGGGATCAATTGCATATGGAACAATCACAGAGGTGGTAAAATGT
 GAGCATGAGCGAGCCGTCCACCTCTTTGTTGACTCTCTGGTGAATCAGGACAAGCCGAGTTTT
 GCCTTCCAGTGCACCTGACTCCAATCGCTTCAAAAAGGGGATCTGTCTGAGCTGCCGCAAGAAC
 CGTTGTAATAGCATTGGCTACAATGCCAAGAAAATGAGGAACAAGAGGAACAGCAAAATGTA
 CCTAAAAACCCGGGAGGCATGCCTTTTACAGAGTTTACCATTATCAGATGAAAATCCATGTCTT
 CAGTTACAAGAACATGGGAGAAATTGAGCCACCTTTTACGTCACCCTTTATGGCACTAATGC
 AGATTCCAGACTCTGCCACTGGAAATAGTGGAGCGGATCGAGCAGAATGCCACCAACA
 CTTTCTTGGTCTACACCGAGGAGGACTTGGGAGACCTCTTGAAGATCCAGCTCACCTGGGAGG
 GGGCCTCTCAGTCTTGGTACAACCTGTGGAAGGAGTTTCGCAGCTACCTGTCTCAACCCCGCA
 ACCCCGAGCGGAGCTGAATATCAGGCGCATCCGGGTGAAGTCTGGGGAAACCCAGCGGAAA
 CTGACATTTTGTACAGAAGACCCTGAGAACACCAGCATATCCCCAGGCCGGGAGCTCTGGTTT
 CGCAAGTGTGCGGATGGCTGGAGGATGAAAAACGAAACAGTCCCACTGTGGAGCTTCCC
TGAGGGTGCCCGGGCAAGTCTTGCCAGCAAGGCAGCAAGACTTCCTGCTATCCAAGCCCATG
 GAGGAAAGTTACTGCTGAGGACCCACCCAATGGAAGGATTCTTCTCAGCCTTGACCCTGGAGC
 ACTGGGAACAACCTGGTCTCCTGTGATGGCTGGGACTCCTCGCGGGAGGGGACTGCGCTGCTAT
 AGCTCTTGCTGCCTCTCTTGAATAGCTCTAACTCCAAACCTCTGTCCACACCTCCAGAGCA
 CCAAGTCCAGATTTGTGTGTAAGCAGCTGGGTGCCTGGGGCCTCTCGTGCACACTGGATTGGT
 TTCTCAGTTGCTGGGCGAGCCTGTACTCTGCCTGACGAGGAACGCTGGCTCCGAAGAGGCCCT
 GTGTAGAAGGCTGTCAGCTGCTCAGCCTGCTTTGAGCCTCAGTGAGAAGTCCTTCCGACAGGA
 GCTGACTCATGTCAGGATGGCAGGCCTGGTATCTTGCTCGGGCCCTGGCTGTTGGGGTTCTCAT
 GGGTTGCACTGACCATACTGCTTACGTCTTAGCCATTCCGTCCTGCTCCCCAGCTCACTCTCTG
 AAGCACACATCATTGGCTTTTCTATTTTTCTGTTTCAATTTTTTAATTGAGCAAATGTCTATTGAAC
 ACTTAAATTAATTAGAATGTGGTAATGGACATATTACTGAGCCTCTCCATTTGGAACCCAGTG
 GAGTTGGGATTTCTAGACCCTCTTTCTGTTTGGATGGTGTATGTGTATATGCATGGGGAAAGGC
 ACCTGGGGCCTGGGGGAGGCTATAGGATATAAGCAGTCGACGCGGCCGCGAATTC

FIG. 4

MSNSVPLLCFWSLCYCFAAGSPVPFGPEGRLEDKLHKPKATQTEVKPSVRFNLRTSKDPEHEGCY
LSVGHSQPLEDCSFNMTAKTFFIIHGWTMSGIFENWLHKLVSALHTREKDANVVVVDWLPLAHQL
YTDVNNTRVVGHSIARMLDWLQEKDDFSLGNVHLIGYSLGAHVAGYAGNFVKGTVGRITGLDP
AGPMFEGADIAHKRLSPDDADFVDVLHTYTRSFGLSIGIQMPVGHIDIYPNGGDFQPGCGLNDVLGSI
AYGTTTEVVKCEHERAVHLFVDSL VNQDKPSFAFQCTDSNRFKKGICLSCKNRNCNSIGYNAKKM
RNKRNSKMYLKTRAGMPFRVYHYQMKIHVFSYKNMGEIEPTFYVTLYGTNADSQTLPLEIVERIE
QNATNTFLVYTEEDLGDLLKIQLTWEGASQSWYNLWKEFRSYLSQPRNPGRELNIRRI RVKSGETQ
RKLTFCTEDPENTSI SPGRELWFRKCRDGWRMKNETSPTVELP

FIG. 5

EL	ATG	AGC	AAC	TCC	GTT	CCT	CTG	CTC	TGT	TTC	TGG	AGC	CTC	TGC	TAT	TGC	TTT	GCT	GCG	GGG	AGC	CCC	GTA
LPL		S	N	S	V	P	L	L	C	F	W	S	L	C	Y	C	F	A	A	G	S	P	V
HL		E	S	K	A	L	L	V	-	-	-	-	-	-	-	-	-	-	L	T	L	A	V
PL		D	T	S	P	-	-	L	C	F	S	I	L	L	V	L	C	I	F	I	Q	S	S
		L	P	L	W	T	L	S	L	L	L	G	A	V	A	G	K	E	V	C	Y	E	R
EL	CCT	TTT	GGT	CCA	GAG	GGA	CGG	CTG	GAA	GAT	AAG	CTC	CAC	AAA	CCC	AAA	GCT	ACA	CAG	ACT	GAG	GTC	
LPL		P	F	G	P	E	G	R	L	E	K	L	H	K	P	K	A	T	Q	T	E	V	27
HL		W	L	Q	S	L	T	A	S	R	G	V	A	A	A	D	Q	R	R	D	F	I	8
PL		A	L	G	Q	S	L	K	P	E	P	F	R	R	A	Q	A	V	E	T	N	K	21
		L	G	C	F	S	D	D	S	P	W	S	I	T	E	R	P	L	H	I	L	P	29
EL	AAA	CCA	TCT	GTG	AGG	TTT	AAC	CTC	CGC	ACC	TCC	AAG	GAC	CCA	GAG	CAT	GAA	GGA	TGC	TAC	CTC	TCC	GTC
LPL		K	P	S	V	R	F	N	L	T	S	K	D	P	E	H	E	G	C	Y	L	S	V
HL		D	I	E	S	K	F	A	R	T	P	E	D	T	A	E	D	T	C	H	I	I	P
PL		T	L	H	E	M	K	T	F	L	L	F	G	E	T	N	Q	G	Q	I	R	I	I
		W	S	P	K	D	V	N	R	F	L	L	Y	T	N	E	N	P	N	N	F	Q	E
EL	GGC	CAC	AGC	CAG	CCC	TTA	GAA	GAC	TGC	AGT	TTC	AAC	ATG	ACA	GCT	AAA	ACC	TTT	-	-	-	-	70
LPL		G	H	V	A	E	L	D	C	S	F	N	M	T	A	K	T	F	-	-	-	I	51
HL		N	A	E	S	V	A	T	C	H	F	N	H	S	S	P	L	F	M	-	-	V	64
PL		V	A	P	D	T	L	E	C	G	F	N	S	S	L	N	R	V	M	-	-	I	74
		A	A	D	S	S	S	I	S	G	S	N	F	K	T	N	K	K	T	R	F	I	
EL	ATT	CAC	GGA	TGG	ACG	ATG	AGC	GGT	ATC	TTT	GAA	AAC	TGG	CTG	CAC	AAA	CTC	GTG	TCA	GCC	CTG	CAC	ACA
LPL		I	H	G	W	T	S	G	I	F	E	N	W	L	A	N	V	C	S	A	L	H	T
HL		I	H	W	W	V	T	G	M	Y	E	S	I	V	P	Q	M	V	A	A	L	Y	K
PL		I	H	W	W	V	D	K	V	L	E	N	A	I	W	N	C	K	A	A	L	K	S
		I	H	G	F	I	D	K	E	E	N	W	L	A	N	V	C	K	-	-	N	L	F
EL	AGA	GAG	AAA	GAC	GCC				AAT	GTA	GTT	GTG	GTT	GAC	TGG	CTC	CCC	CTG	GCC	CAC	CTT	TAC	
LPL		R	E	E	K	D	D	A	N	V	V	V	V	D	W	L	P	L	A	Q	L	Y	113
HL		R	E	P	S	D	D	S	N	V	I	V	V	D	W	L	S	R	E	E	H	Y	94
PL		Q	A	Q	V	P	P	V	N	V	G	L	C	D	W	I	T	L	D	D	H	Y	108
		K	-	-	S	E	-	V	N	C	I	C	V	D	W	K	G	G	R	T	G	Y	115

FIG. 6A

EL	ACG	GAT	GCG	GTC	AAT	AAT	ACC	AGG	GTG	GTG	GGA	CAC	AGC	ATT	GCC	AGG	ATG	CTC	GAC	TGG	CTG	CAG	GAG
LPL					N	N	T	K	V	V	G	H	S	I	A	R	M	L	D	W	L	Q	E
HL					G	Y	T	R	L	L	G	Q	D	V	A	R	F	I	N	W	M	E	
PL					R	N	T	R	L	L	G	K	E	V	A	A	L	L	R	W	L	E	
					Q	N	I	R	I	V	G	A	E	V	A	Y	F	V	E	F	L	Q	S
EL	AAG	GAC	GAT	TTT	TCT	CTC	GGG	AAT	GTC	CAC	TTG	ATC	GGC	TAC	AGC	CTC	GGA	GCG	CAC	GTG	GCC	GGG	
LPL					S	L	G	N	V	H	L	L	G	Y	S	L	G	A	H	V	A	G	158
HL					P	L	D	N	V	H	L	L	G	Y	S	L	G	A	H	A	A	G	139
PL					S	R	S	H	V	H	L	L	G	Y	S	L	G	A	H	V	S	G	153
					S	P	S	N	V	H	V	I	G	H	S	L	G	A	H	A	A	G	160
EL	TAT	GCA	GGC	AAC	TTC	GTG	AAA	GGA	ACG				GTG	GGC	CGA	ATC	ACA	GGT	TTG	GAT	CCT	GGG	CCC
LPL					F	V	K	G	T	-	-	-	V	G	R	I	T	G	L	D	P	G	P
HL					L	T	N	K	-	-	-	V	N	R	R	I	T	G	L	D	P	G	P
PL					S	I	G	G	T	-	-	I	G	R	R	I	T	G	L	D	P	G	P
					R	T	N	N	T			I	G	R	R	I	T	G	L	D	P	G	P
EL	ATG	TTT	GAA	GGG	GCC	GAC	ATC	CAC	AAG	AGG	CTC	TCT	CCG	GAC	GAT	GCA	GAT	TTT	GTG	GAT	GTC	CTC	
LPL					A	D	I	H	K	R	L	L	P	D	D	A	D	F	V	D	V	L	201
HL					E	E	A	P	S	R	L	L	P	D	D	A	D	F	V	D	V	L	182
PL					E	A	P	S	N	R	L	L	P	D	D	A	D	F	V	D	V	I	198
					Q	P	E	L	V				P	S	D	A	K	F	V	D	V	I	203
EL	CAC	ACC	TAC	ACG	CGT	TCC	TTC			GGC	TTG	AGC	ATT	GGT	ATT	CAG	ATG	CCT	GTG	GGC	CAC	ATT	GAC
LPL					T	S	F	-	-	G	L	L	I	G	I	Q	M	P	V	G	H	I	D
HL					T	G	S	P	-	G	R	L	I	G	I	Q	K	P	V	G	H	V	D
PL					T	E	H	M	-	G	L	L	V	G	I	K	Q	P	I	G	H	Y	D
					D	P	I	V		N			F	G	M	S	Q	V	V	G	H	L	D
EL	ATC	TAC	CCC	AAT	GGG	GGT	GAC	TTC	CAG	CCA	GGC	TGT	GGG	CTC	AAC	GAT	GTC	TTG	GGA	TCA	ATT	GCA	
LPL					N	G	D	F	Q	P	G	C	G	L	N	D	V	L	G	S	I	A	244
HL					N	G	T	F	Q	P	G	C	N	I	G	E	A	I	R	V	I	A	226
PL					N	G	S	F	Q	P	G	C	H	F	L	E	L	Y	R	H	I	A	242
					N	G	V	E	M	P	G	C	K	K	I	I	L	S	Q	I	V	D	248

FIG. 6B

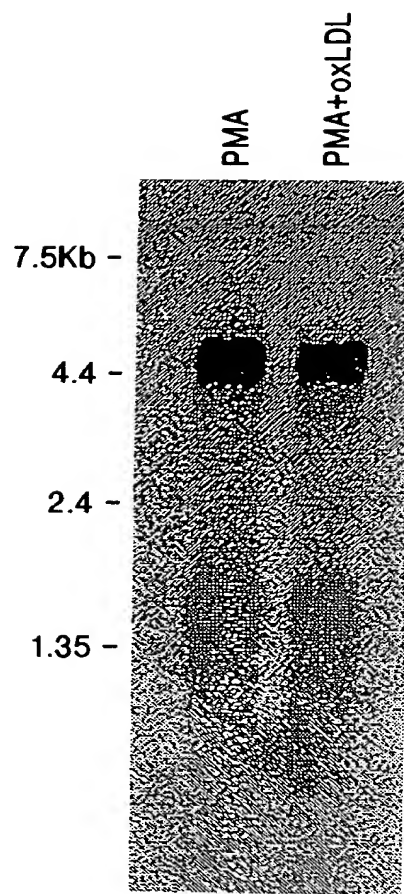


FIG. 7

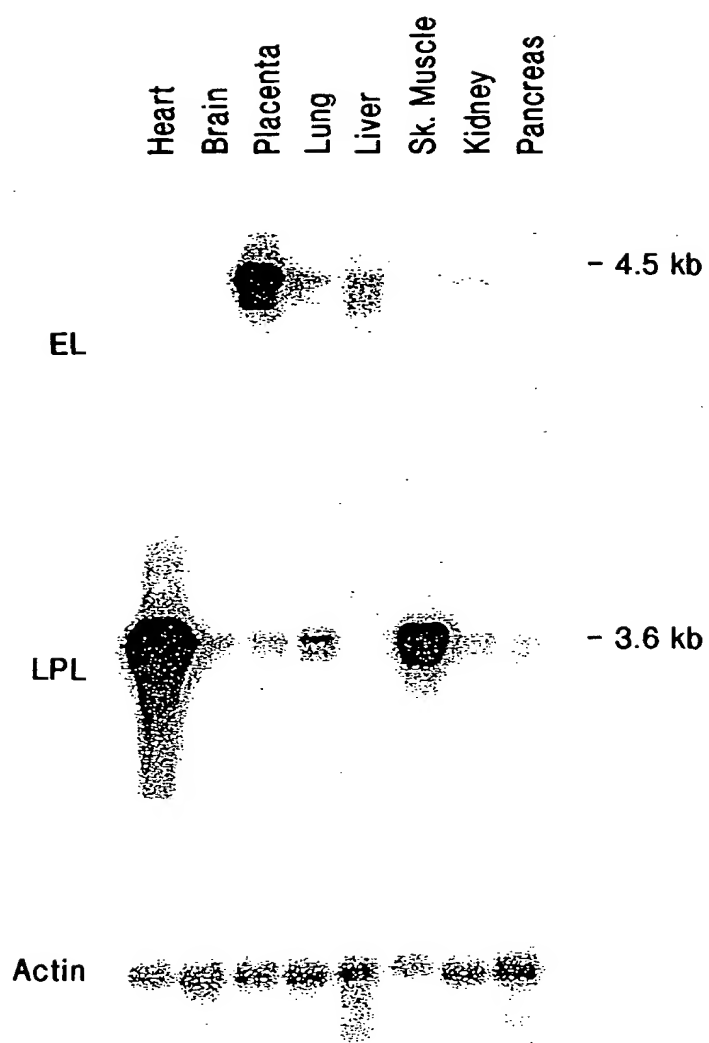


FIG. 8

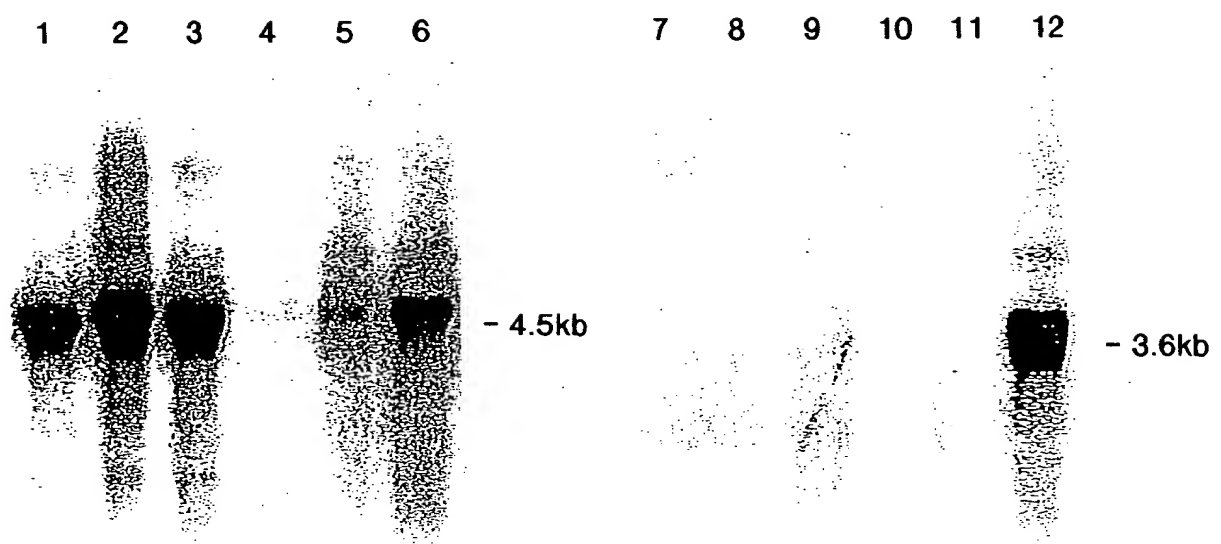


FIG. 9

GPEGRLFDKLHKPKATC
 MSNSVPLLCFWSLCYCFAAGSPVPFGPEGRLEDKLHKPKATQTEVKPSVRFNLRSTSKDPEHEGCYL
 SVGHSQPLEDCSFNMTAKTFFIIHGWTMSGIFENWLHKLVSALHTREKDNVVDWLPPLAHQLY
 TDAVNNTRVVGHSIARMLDWLQEKDDFSLGNVHLIGYSLGAHVAGYAGNFVKGTVGRITGLDPA
 GPMFEGADIAHKRLSPDDADFVDVLHTYTRSFGLSIGIQMPVGHIDIYPNGGDFQPGCCGLNDVLGSIA
 YGTTTEVVKCEHERAVHLFVDSLVDKPSFAFQCTDSNRFKKGICLSCKNRCNSIGYNACKMR
 NKRNSKMYLKTTRAGMPFRVYHYQMKIHVFSYKNMGEIEPTFYVTLYGTNADSQTLPLEIVERIEQ
 NATNTFLVYTEEDLGDLLKIQLTWEGASQSWYNLWKEFRSYLSQPRNPGRELNIRIRVKSGETQR
 KLTFCTEDPENTSI SPGRELWFRKCRDGRMKNETSPTVELP

FIG. 10

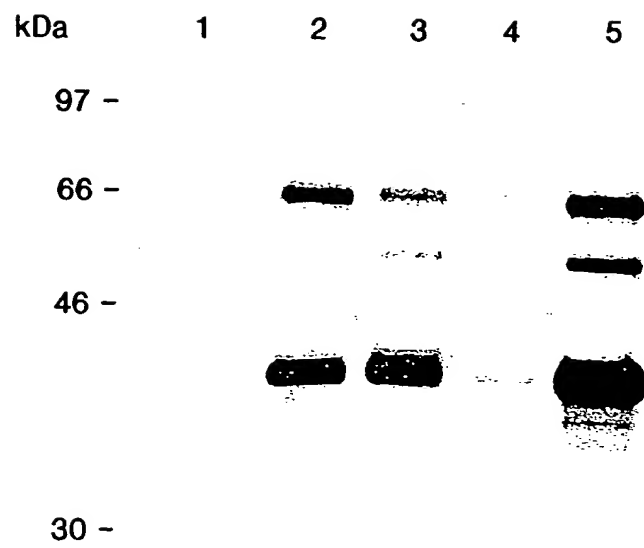


FIG. 11

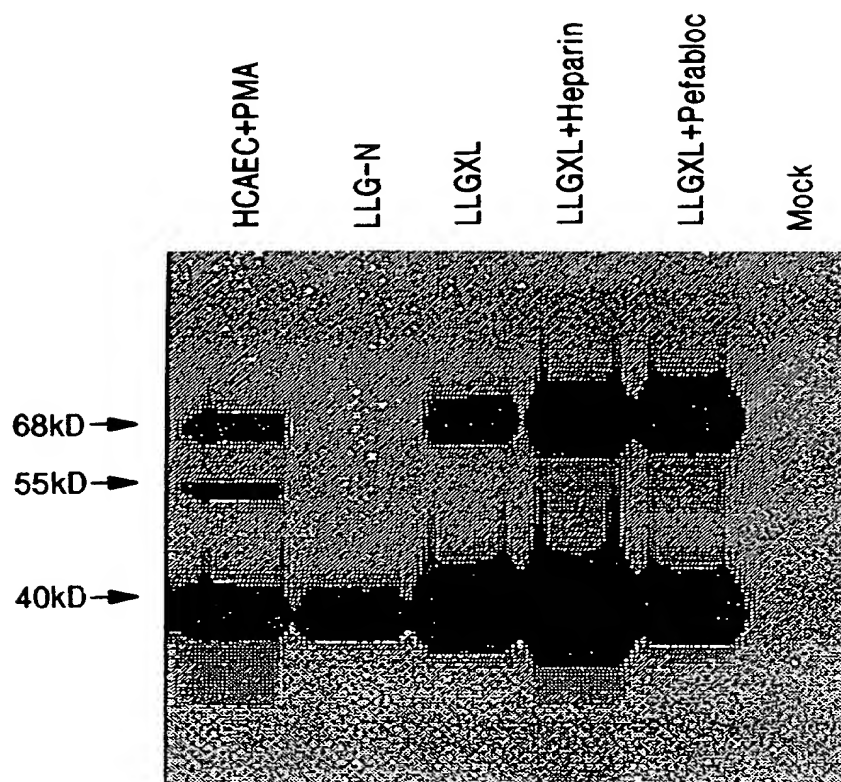
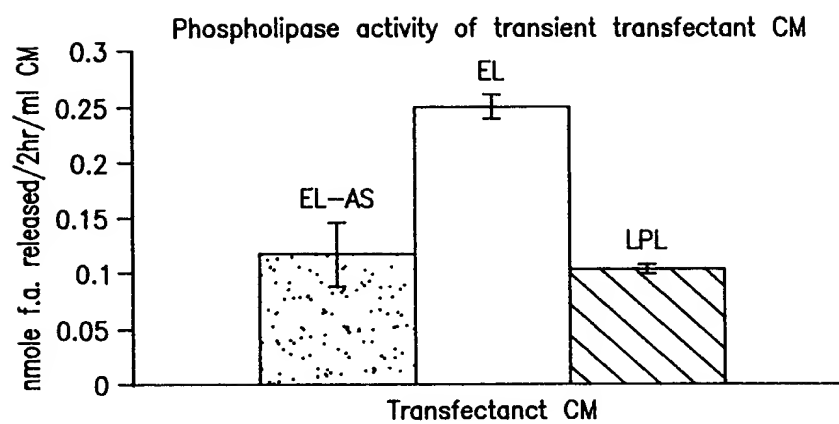
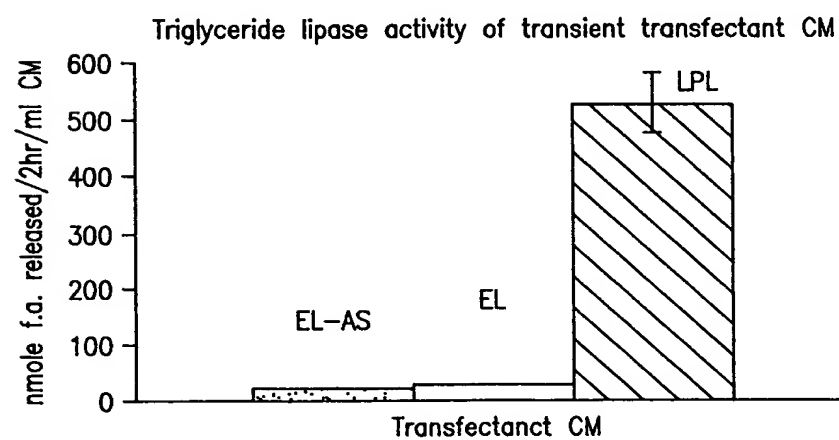


FIG. 12

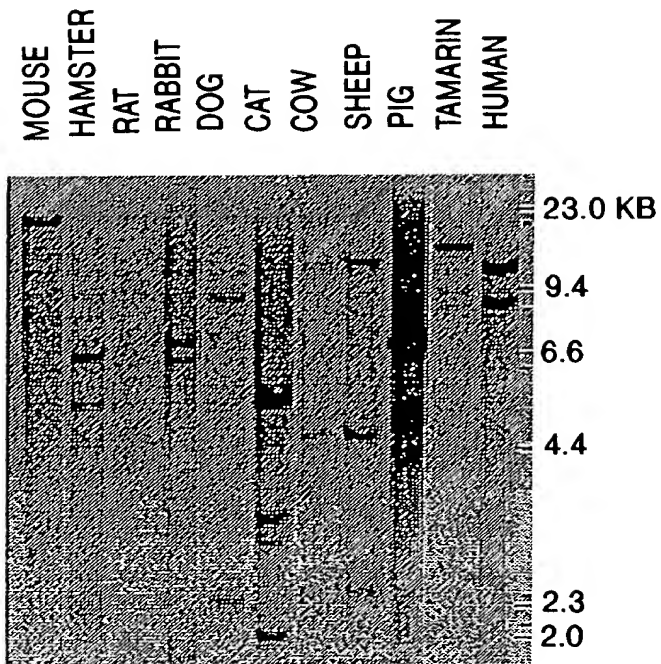
		10	20	30	40																																			
1	T	T	G	G	A	T	C	A	A	T	T	G	C	A	T	C	A	C	A	G	A	G	G	T	G	G	T	A	A											
1	C	T	G	G	A	T	C	C	A	T	C	G	C	A	T	C	G	C	G	A	G	G	T	G	G	T	G	A												
		50	60	70	80																																			
41	A	A	T	G	T	G	A	G	C	A	T	G	A	G	C	C	G	T	C	C	A	C	C	T	T	T	G	T	T	G	A	C	T	C						
41	A	G	T	G	C	G	A	G	C	A	T	G	A	G	C	G	T	G	C	A	T	C	T	C	T	T	T	G	T	G	A	C	T	C						
		90	100	110	120																																			
81	T	C	T	G	G	T	G	A	A	T	C	A	G	G	A	C	A	A	G	C	C	G	A	G	T	T	T	G	C	C	T	T	C	C	A	G	T	G	C	
81	C	C	T	G	G	T	G	A	A	C	C	A	G	G	A	C	A	A	G	C	C	G	A	G	C	T	T	T	G	C	C	T	T	C	C	A	G	T	G	C
		130	140	150	160																																			
121	A	C	T	G	A	C	T	C	C	A	A	T	C	G	C	T	T	C	A	A	A	A	A	G	G	G	A	T	C	T	G	T	C	T	G	A	G	C	T	
121	A	C	A	G	A	C	T	C	C	A	A	C	G	C	T	T	C	A	A	A	A	A	A	A	G	G	A	T	C	T	G	T	C	T	C	T	A	G	C	T
		170	180	190	200																																			
161	G	C	C	G	C	A	A	G	A	A	C	C	G	T	T	G	T	A	A	T	A	G	C	A	T	T	G	G	C	T	A	C	A	A	T	G	C	C	A	A
161	G	C	C	G	G	A	A	G	A	A	C	C	G	C	T	G	T	A	A	C	G	G	C	A	T	C	G	G	C	T	A	C	A	A	T	G	C	T	A	A
		210	220																																					
201	G	A	A	A	T	G	A	G	G	A	A	C	A	A	G	A	G	A	A	C	A	G	C																	
201	G	A	A	G	A	C	G	A	G	A	A	T	A	A	G	A	G	A	A	C	A	C	C																	

LLG7742A
RLLG.SEQLLG7742A
RLLG.SEQLLG7742A
RLLG.SEQLLG7742A
RLLG.SEQLLG7742A
RLLG.SEQLLG7742A
RLLG.SEQ

FIG. 13

**FIG. 14****FIG. 15**

LLG



LPL

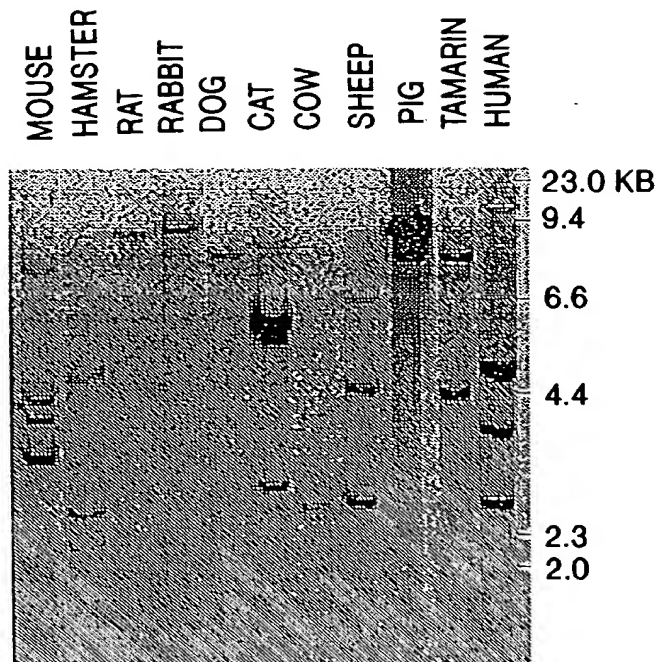


FIG. 16

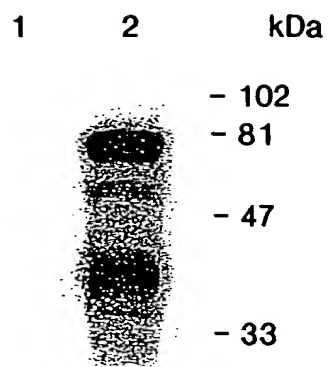
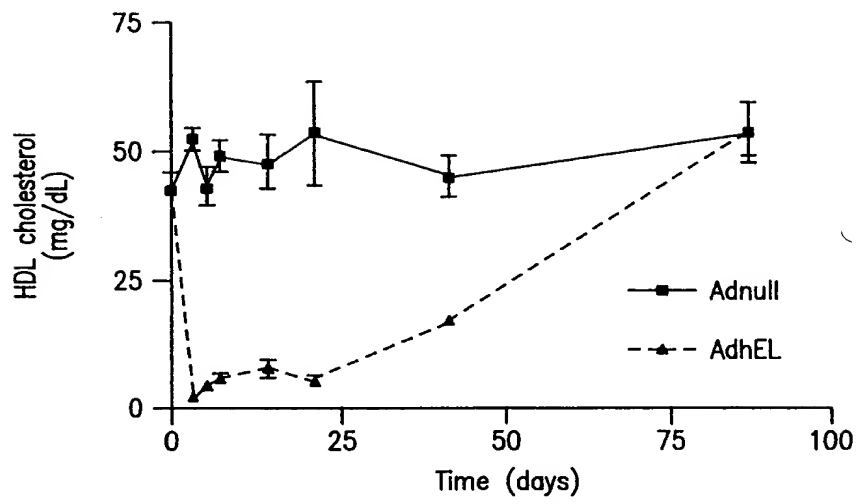


FIG. 17

**FIG. 18**

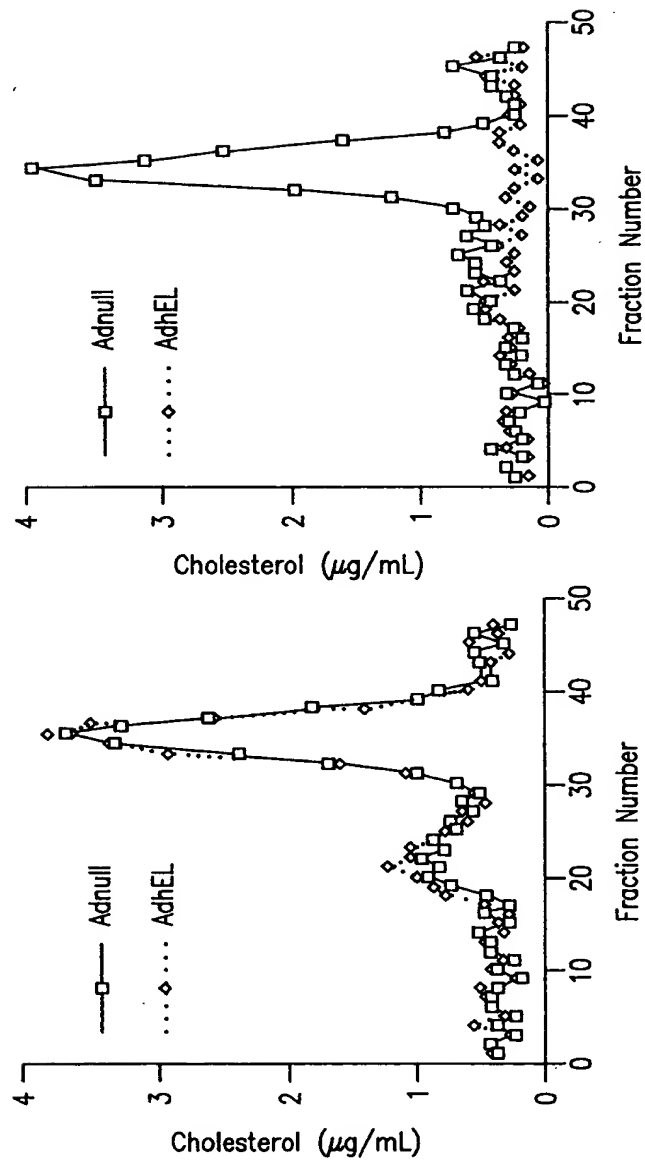


FIG. 19

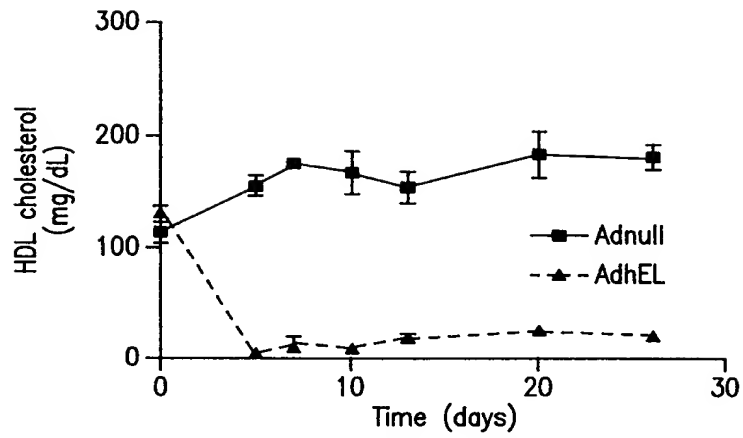


FIG. 20

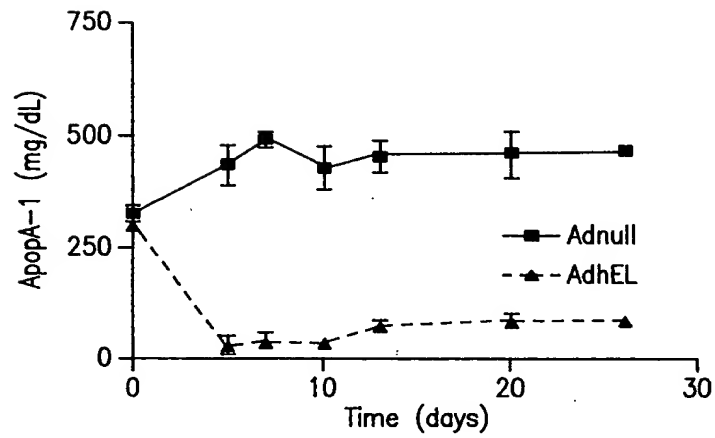


FIG. 21

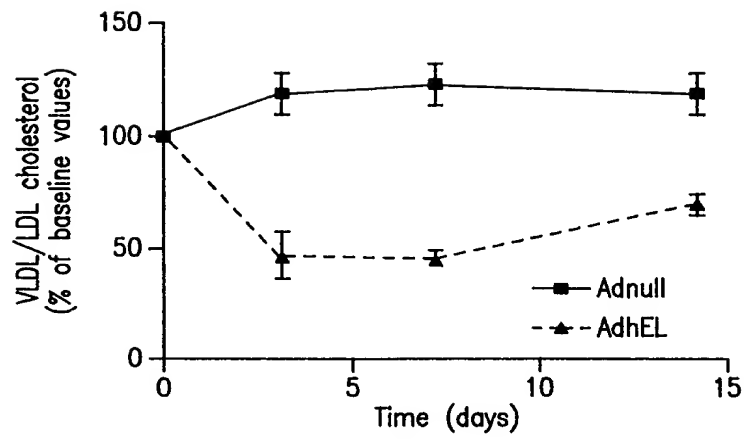


FIG. 22

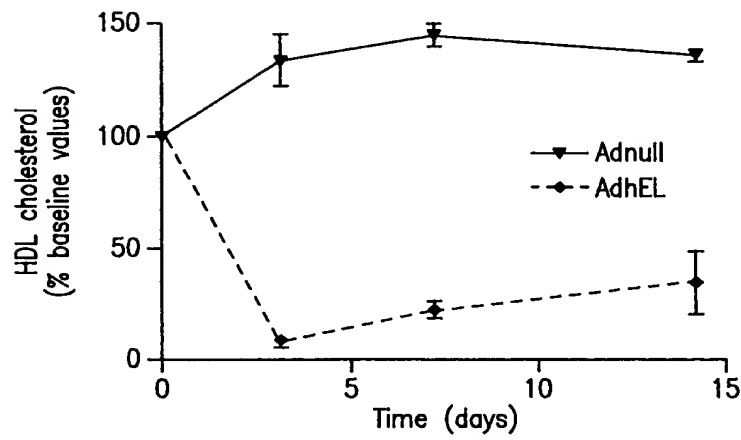


FIG. 23

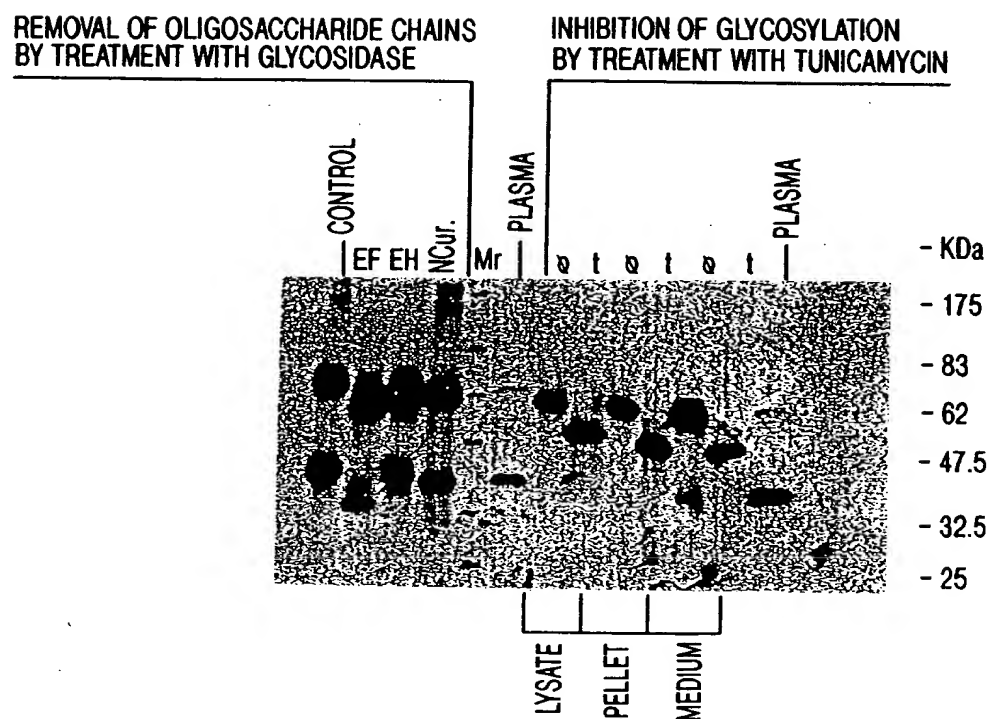


FIG. 24

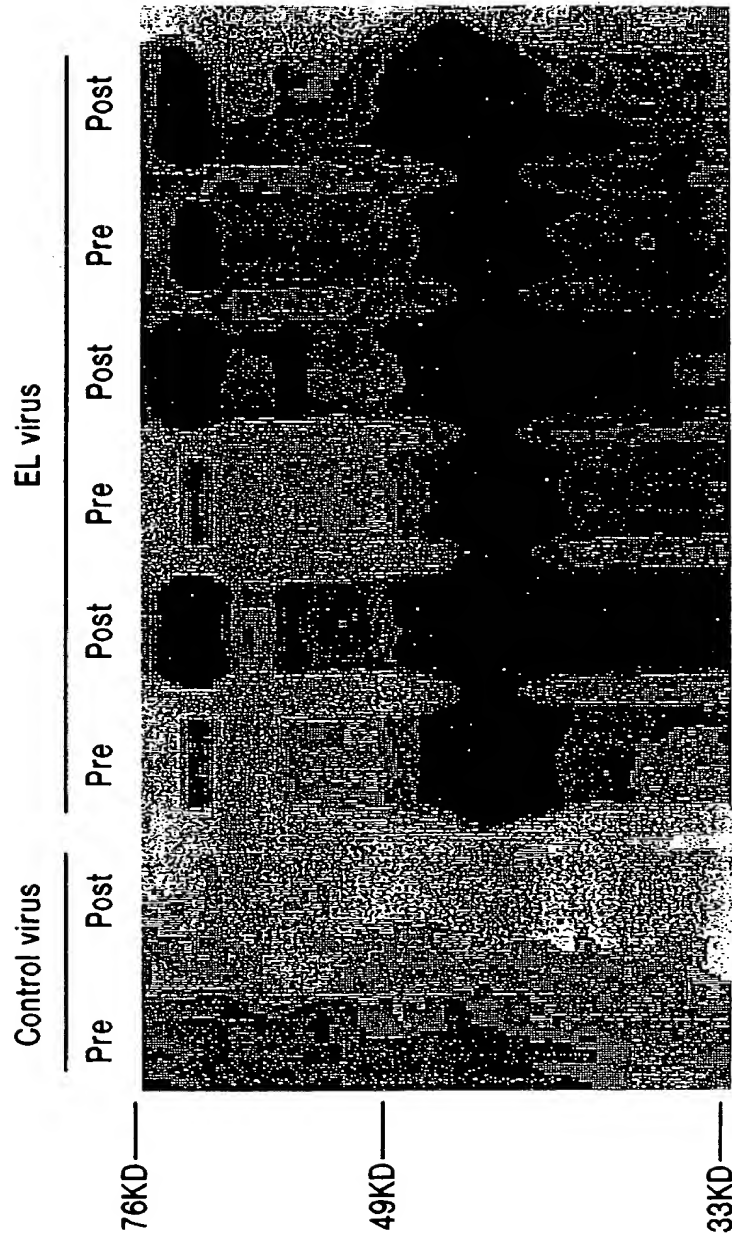


FIG. 25

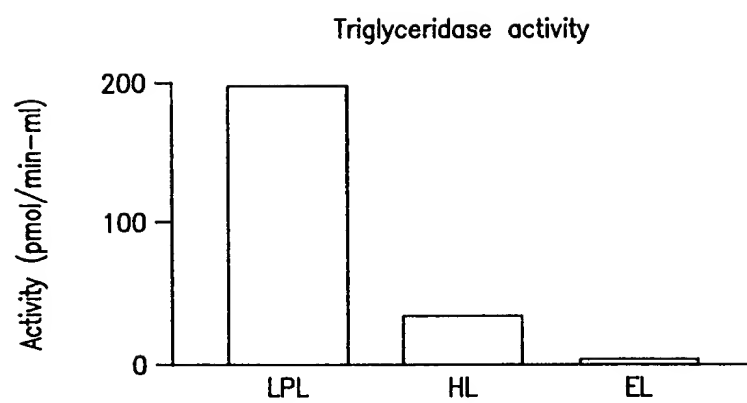


FIG. 26A

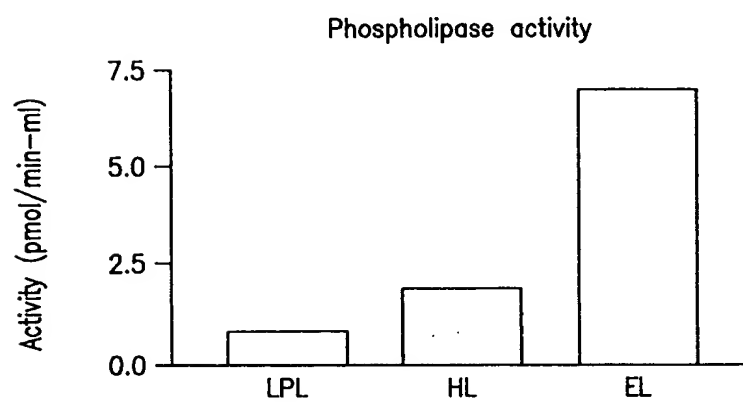


FIG. 26B

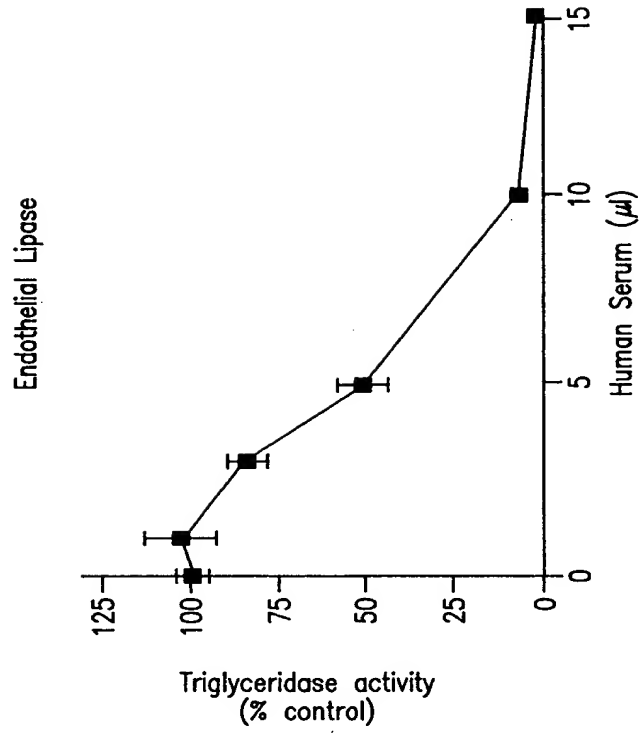


FIG. 27B

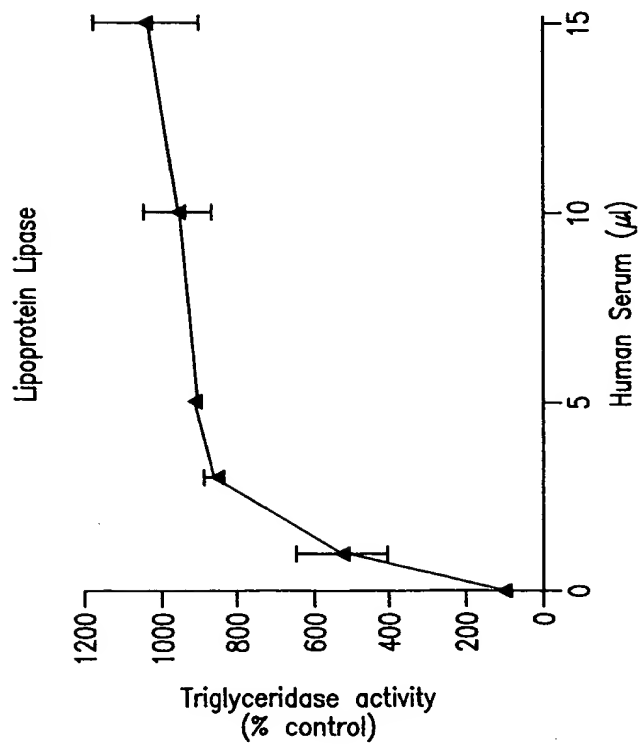


FIG. 27A

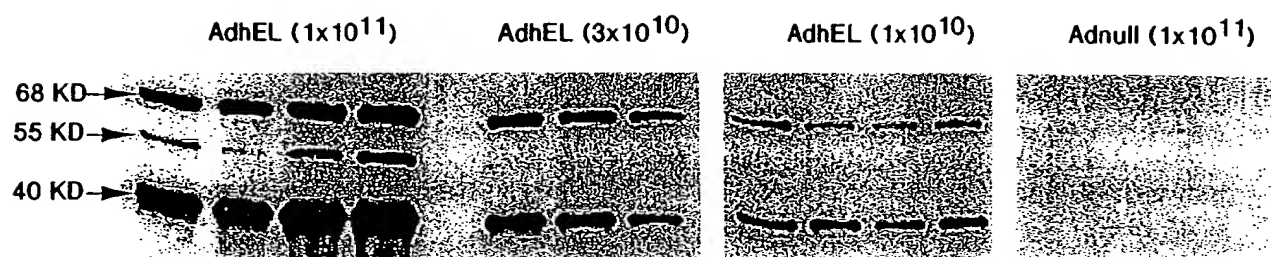


FIG. 28A

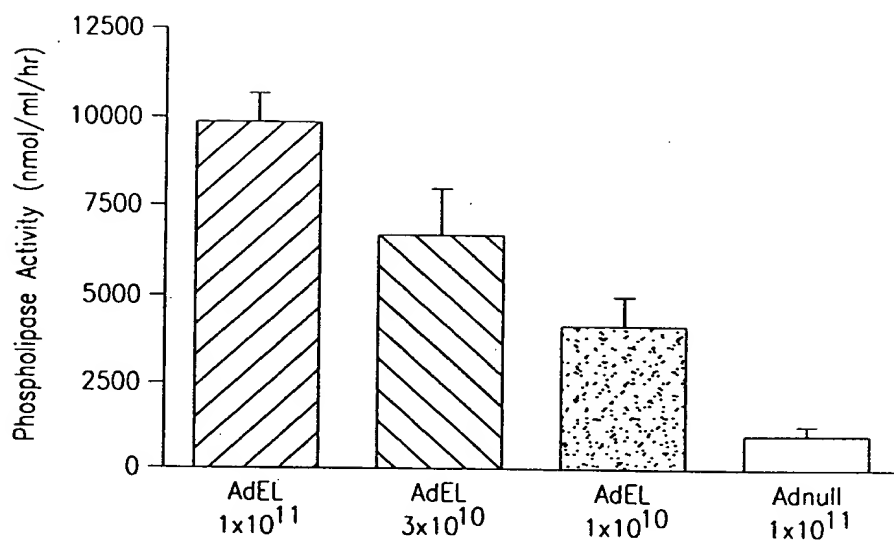


FIG. 28B

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.